



University College Sedaya International



SCHOOL OF ENGINEERING

FINAL YEAR ENGINEERING PROJECT

2D NUMERICAL DEVICE SIMULATION TO STUDY ESD PHENOMENA IN MOSFET

NAME	:VELAN HARI OM
STUDENT ID	:99208337
MAJOR	:B.ENG (Hons) COMMUNICATIONS AND ELECTRONICS
1ST SUPERVISOR	: DR.KHEDR M.M.ABOHASSAN
2ND SUPERVISOR	: MR. AMAR
PROJECT COORDINATOR	: DR.KHEDR M.M.ABOHASSAN

MAY – DECEMBER 2004

ABSTRACT

This project is about ESD (Electrostatic Discharge) phenomena in a MOSFET. ESD is a major failure in manufacturing MOSFET. In this project, the ESD phenomena will be discussed in details by changing the parameter of the MOSFET. In addition to predicting I-V curves, simulations can identify the point of device failure by monitoring the electric field, temperature, and other properties throughout the device during an ESD stress. The simulation will be carried out using a program called Microwind2 software. At the end, the simulated result will be compared with the theoretical results and this project concludes with a discussion of future work and issues pertaining to impact of ESD on future technologies.